Pest Update (September 23-30, 2009)

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E-samples

Chestnuts roasting over an open fire…

This is the time of year when I get lots of questions about eating those 'chestnuts' that are falling everywhere. One the next page is a picture of these fruits sent in by a County Educator this week, but I get them almost

every day at this time of year. First, these are *not* chestnuts. The American chestnut (*Castanea dentata*) is not adapted to our state's growing conditions and the furthest west one that I have found one growing is in the Hodgson Arboretum at the University of Minnesota Experiment Station in Waseca, Minnesota (a nice little arboretum, well worth the drive over if you are in the area). There is also a small one in the eastern side of Brookings County but that is it as far as I know.

There are few American chestnuts anywhere due to the disease Chestnut blight that entered the country from Asia in 1904 and almost eliminated the species – once one of the most common trees in the Eastern Deciduous Forest – within 50 years. The Chinese chestnut (*C. mollissima*) is even less hardy and I do not know of any in South Dakota or western Minnesota. The ones planted at the Minnesota Horticulture Research Center near the Twin Cities have been short-lived.

What people bring or send in as chestnuts are the nuts from the buckeye tree (*Aesculus glabra*). This is a common tree in our region since the squirrels plant them for free in almost every garden. The nut contains the poisonous glycosides aesculin and fraxin. Ingesting the raw seed can result in muscle twitching, vomiting and abdominal pain, diarrhea and death. The raw nuts, tender shoots and leaves, particularly wilted leaves, are also toxic to horses and cattle (rabbits too but they seem to be smart enough not to eat them). Squirrels seem to do just fine eating the raw nut and it apparently contains a sweetener that (at least to a squirrel) is sweeter than sugar. The nut can be made safe for human consumption by roasting and leaching and they were used as a starchy food by Native American but I do not recommend even trying to do this.

I also usually receive some "what is wrong with my apple" calls at this time of harvest. This is the disease sooty blotch – great name, just makes you want to eat the fruit – a fungal disease (*Gloeodes pomigena*) that causes discoloration and blemishes on the fruit as it nears maturity. This is a disease that often occurs only on the interior or lower fruit as the cool, moist environment in the interior of the tree lends itself to the development of the fungus. The disease is more a problem with appearance than use and the blotches can often be removed with washing and rubbing and the fruit still used for eating and cooking. Any fungicide application would have been applied earlier, as the fruit was forming.

I had another interesting sample e-mailed and then mailed to me. **This is a smokebush (*Cotinus* spp) that is infected with verticillium wilt.** This vascular disease appears to be expressing symptoms more this year than in past years, perhaps due in part to the cool, moist weather we experienced for much of the summer. I have received numerous samples of catalpa (and some maples) that have shown signs of infection. Smokebush (sometimes called smoketree) are also susceptible to the disease though I rarely see an infected plant. Verticillium wilt is a soil-borne fungus that affects a wide range of hosts but maples and catalpa are the primary woody plants that are affected by it in our region. The disease results in leaf curling and drying, also wilting, followed by branch dieback and sometimes the death of the entire tree. Many infected plants will only have a branch or two express symptoms and the disease does not spread out from there. Other times the complete tree wilts and dies the same summer. I suggest they prune out any dying branches and see if the shrub recovers next spring.

I also received a Mongolian cherry (*Prunus fruticosa*) infected with leaf spot. This disease was in an earlier *Update* (Aug 19-26, 2009) and it appears to be a common occurrence this summer. This foliar fungus disease occurs on cherries and plums. The disease begins in the spring as dark purple spots on the newly expanded leave. These lesions continue to develop until late summer when the leave, now also yellowing, begins to fall prematurely. The disease is most often managed by raking up and destroying the fallen, infected leaves and pruning away dead shoots. Fungicides containing chlorothalonil can be applied beginning as the leaf expands and continuing with three more applications spaced about two weeks apart.

Samples received

Davison County (extension) **The owner says that several of the pines are losing their needles and some twigs and branches have died. What might be going on?**

This is Diplodia tip blight, a common disease of pines in our area that results in stunted shoots that have wilted, brown to gray needles attached. Eventually the affected branches often suffer dieback. The disease is an interesting one in that it seems to appear after hail storms and it was once though that the hail created wounds that allowed entry to the fungus. Now it appears that the hail stresses a tree that already is colonized by the fungus and

the stress just allows the fungus to become more aggressive and cause the symptoms to be more noticeable. The disease can be managed, but not eliminated, by any application of chlorothalonil or a copper containing fungicide just as the buds are opening and repeated just as the needles emerge and a third and final application made about 10 days later.

Gregory County (conservation district) **What is causing this Austrian and Scot pine to decline?**

This was not Diplodia tip blight nor any of the other common twig or needle diseases. The discoloration of the needles makes me suspect pine wilt disease. This is a common disease of Austrian and Scot pines in Nebraska and we are finding it more often in the southern half of South Dakota (south of I-90). I cannot test for the disease from the small sample provided but if the trees are still standing I would like to stop by and collect some samples for further testing.

Hand County (extension) **Here is some samples from the declining evergreens.**

As directed, I am contacting the homeowner directly (we have spoke a couple of times on the phone). I think we have this figured out but will let you know when everything is settled.

Minnehaha County (extension) **What is causing this decline of the spruce at Dean's house?**

Wow, this Black Hills spruce had it all! I was able to find a very heavy population of spruce needleminer, spruce bud scale and even pine needle scale on the sample! The "healthy" sample sent in with it also had the needleminer and bud scale but at much lower densities. I would treat the tree in early April with an insecticide containing acephate to control the needleminer and repeat the treatment in mid-June; about the time lindens are blooming, to control the bud scale.

Perkins County (conservation district) **This is a ponderosa pine that is doing poorly. There were two big hail storms in recent times that may have contributed to the damage.**

This is Diploida tip blight, not Dothistroma needle blight. Dothistroma needle blight damage is limited to the needle and does not stunt the shoot tip, as occurs with diplodia tip blight. Also the needles infected with dothistroma needle blight are often banded with the reddish bands having a yellow halo. Diplodia will usually have browning needles and at this time the black fruiting structures can be found at the base of the needle, usually just beneath the sheath. For more information on Diplodia see the comments under the sample from Davison County.

Yankton County (extension) **This is about the discolored variegated Norway maple? Why does this look so bad?**

This is a problem with the variegated Norway maple, they can scorch very easily. I recommend planting in a light shade and moist soils to reduce this problem but frankly by mid to late summer the continuous exposure to our bright sun tend to have many members of this cultivar become discolored.

Yankton County (extension) **Please identify this shrub so the homeowner will know how big it will be at maturity.**

This is the Tatarian honeysuckle (*Lonicera tatarica*). In South Dakota these plants can reach a height of 10 to 16 feet.

Yankton County (extension) **What is wrong with these pines?**

This is an eastern white pine (*Pinus strobus*) and the white, fuzzy, material on the twigs is the pine bark adelgid. This is a sucking insect that is found on white pines (a five-needled pine) throughout eastern South Dakota. The white filament covering the insects can be found on twigs, branches and trunks, sometimes covering the entire trunk except at the whorls! The overwintering females can be control before they lay eggs by an early April spray of horticultural oils or insecticidal soap. Even a high-pressure stream of water may be sufficient to reduce the population and this may be the best option as the insect rarely reaches a population size to injury trees in our state